

**REMARKS**

Claims 1-15 are pending in this application. Claims 1-15 stand rejected and claims 7, 9-12 and 14 are objected to. By this Amendment, claims 1-2, 5-7, and 9-14, have been amended. The amendments made to the claims do not alter the scope of these claims, nor have these amendments been made to define over the prior art. Rather, the amendments to the claims have been made for cosmetic reasons to improve the form thereof. In light of the amendments and remarks set forth below, Applicants respectfully submit that each of the pending claims is in immediate condition for allowance.

The drawings have been objected to under 37 C.F.R. § 1.83(a). The drawings and specification have been amended in light of the objections. No new matter has been added. As such, Applicants request entering of the drawings and withdrawal of the objections.

Applicants note that the Figures are objected to for failing to comply with 37 C.F.R. § 1.84(p)(5) because they do not include the following reference signs mentioned in the description such as MA on pages 13 and 14 as well as MA and MB. The Examiner notes that Figures 1, 6B and 6C contain MA and MB but that other Figures that reference these messages in the specification do not contain them. The designators MA and MB refer to messages from node A or node B respectively. As such, one skilled in the art, when reading the specification, would understand that the MA and MB designators do not have to appear in each and every figure for clarity. As such, it is respectfully requested that the Examiner withdraw this objection.

Applicants have amended the specification to remove the objections noted by the Examiner. No new matter has been added. As such, it is respectfully requested that the Examiner withdraw the objections to the specification and claims.

Claims 11 and 14 are objected to under 37 C.F.R. § 1.75(c) as being improper dependent claims for failing to further limit the subject matter of a previous claim. Applicant respectfully requests reconsideration and withdrawal of this objection. Claim 11, as written, further limits claim 10 and claim 14, as written, further limits claim 13. In claim 10, as the Office Action points out, there is a pattern through output port OD to a target destination for a message MA and a path through output port OH to a target destination for message MB. The Office Action asserts that by providing a path for the messages to their respective output ports, the routing logic has provided a non-blocked path for these ports. However, claim 10 does not state whether or not the specific path is interrupted or not. Claim 11 further limits claim 10 by stating that the path is not blocked. As such, claim 11 does further limit claim 10. Claim 14 similarly limits claim 13. Therefore, Applicants respectfully request that the Examiner withdraw the objections to claims 11 and 14.

Claims 7, 9, 10, 11, 12, and 14 are objected to for various informalities. Applicants have amended the claims in light of these informalities. As such, the Applicants respectfully request that the Examiner withdraw his objections to these claims. Applicants have added no new matter in overcoming these objections.

Claims 1-4, 6-12, and 13-15 stand rejected under 35 U.S.C. § 112 as failing to comply with the enablement requirement. Applicants have reviewed these

rejections and amended the claims in light of the rejection to more clearly describe the invention. As such, it is respectfully requested that the rejection under 35 U.S.C. § 112 be withdrawn.

Claim 1 was rejected because, as written, a node existed where data could be routed to it from both node A and node E. Applicants have amended the claim to explicitly recite that no node exists in the interconnect structure that can have data directly routed to it from both the node A and the node E. As such, the rejection to claim 1 should be withdrawn.

Claim 2 stands rejected as it states that no node exists in the interconnect structure that can receive data routed from both node A and node F. Applicants respectfully traverse this rejection. Applicants have amended claim 2 to recite that no node exists in the interconnect structure that can receive data directly routed from both node A and node F. As such, Applicants respectfully request that this objection be withdrawn.

Claim 8 stands rejected because it states “the nodes E, F and H are on a level of the hierarchy directly below the level of the node B.” In Figures 6A and 7, node is shown on the same level as n, as node B. However, within a level a hierarchy can exist as discussed with respect to Figure 8. While E may be on the same level “N” in the hierarchy, it has a lower priority thereby being on a level of the hierarchy below node B. As such, Applicants respectfully request the rejection to claim 8 be withdrawn.

The Office Action objects to the phrase “a plurality of interconnected structure output ports.” Applicants have amended the claims to remove this phrase. No new matter has been added. Applicants respectfully request withdrawal of this rejection.

Claim 10 is objected to due to the labeling of the input and output ports. As such, Applicants have amended the claims to recite first and second input and output ports. Thus, withdrawal of this rejection is respectfully requested.

Claim 5 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,416,769 (“Karol”). Applicants respectfully request reconsideration and withdrawal of this rejection.

To anticipate a claim under 35 U.S.C. § 102, the cited reference must disclose every element of the claim, as arranged in the claim, and in sufficient detail to enable one skilled in the art to make and use the anticipated subject matter. See, PPG Industries, Inc. v. Guardian Industries Corp., 75 F.3d 1558, 1566 (Fed. Cir. 1996); C.R. Bard, Inc. v. M3 Sys., Inc., 157 F.3d 1340, 1349 (Fed. Cir. 1998). A reference that does not expressly disclose all of the elements of a claimed invention cannot anticipate unless all of the undisclosed elements are inherently present in the reference. See, Continental Can Co. USA v. Monsanto Co., 942 F.2d 1264, 1268 (Fed. Cir. 1991).

Among the limitations of independent claim 5 not present in the cited reference is

a control signal carrying line connected from the node B to the node A for carrying control signals from the node B to the node A; and

a routing selection logic associated with the node B capable of sending data to the node C and sending a control signal to the node A that can inform the node A that the node A is allowed to send a message to the node C.

Karol fails to disclose an interconnect structure where each node includes routing selection logic and the nodes directly communicate via a control signal carrying line. Figure 3 is incorrectly interpreted to indicate that there are control signals generated at node 303 that travel along the control line (the dashed line) from nodes 303 and 304.

In Karol, there is an external control 307 responsible for all routing decisions. (See, column 6, lines 12-13.) All inputs to Karol's switch must send their headers to the control 307. Control 307 makes routing decisions and sends this information back to each node of the switch via control lines. These control lines to and from the external control 307 are clearly shown in Figures 1 and 3 of Karol. While Figure 3 apparently shows a single control line from controller 307 to nodes 304, 303, 320 and 319, in fact, as discussed above, because each node must send headers to the control 307, which makes the ultimate routing decisions, each of the control lines is, in effect, going to each node from controller 307 separately, not from node to node as explicitly recited in Applicants' claims.

The routing information is generated at the control 307 and not at each individual node by routing selection logic associated with each node. Thus, there is no control line and routing logic associated with the node (i.e., a line carrying

control signals from the node B to the node A and routing logic associated with the node B capable of sending data to the node C and sending a control signal to the node A that can inform the node A that the node A is allowed to send a message to the node C). As such, Karol fails to disclose the explicitly recited limitations of claim 5. Applicants respectfully request withdrawal of this rejection.

Claim 9 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Karol in view of U.S. Patent No. 5,617,413 ("Monacos"): Applicants respectfully request reconsideration and withdrawal of this rejection.

To establish a *prima facie* case of obviousness, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify a reference or combine references to arrive at the claimed subject matter. The prior art references must also teach or suggest all the limitations of the claim in question. See, M.P.E.P. § 706.02(j). A reference can only be used for what it clearly discloses or suggests. See In re Hummer, 113 U.S.P.Q. 66 (C.C.P.A. 1957); In re Stencel, 4 U.S.P.Q.2d 1071, 1073 (Fed. Cir. 1987). Here, the references, whether taken individually or in combination, do not disclose or suggest the invention claimed by the Applicants.

Among the limitations of claim 9 not present in the cited reference is a plurality of nodes including the distinct nodes A, B, and C ... each of the plurality of nodes adapted to generate control signals. As discussed above, with respect to claim 5, the Karol reference fails to disclose each of the nodes adapted to generate control signals. In Karol, a main controller 307 controls all of the routing messages.

In contrast, as explicitly recited in claim 9, each of the nodes generates control signals. As such, Karol is silent as to each node adapted to generate control signals. The addition of Monacos fails to cure this deficiency. As such, claim 9 is allowable over the cited references.

Applicants have responded to all of the rejections and objections recited in the Office Action. Reconsideration and a Notice of Allowance for all of the pending claims are therefore respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of the claims and to pass this application to issue.

Application No.: 09/692,073

Docket No.: I2455.0009

If the Examiner believes an interview would be of assistance, the Examiner is welcome to contact the undersigned at the number listed below.

Dated:

Respectfully submitted,

By \_\_\_\_\_

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Application No.: 09/692,073

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**REPLACEMENT SHEET**



Application No.: 09/692,073

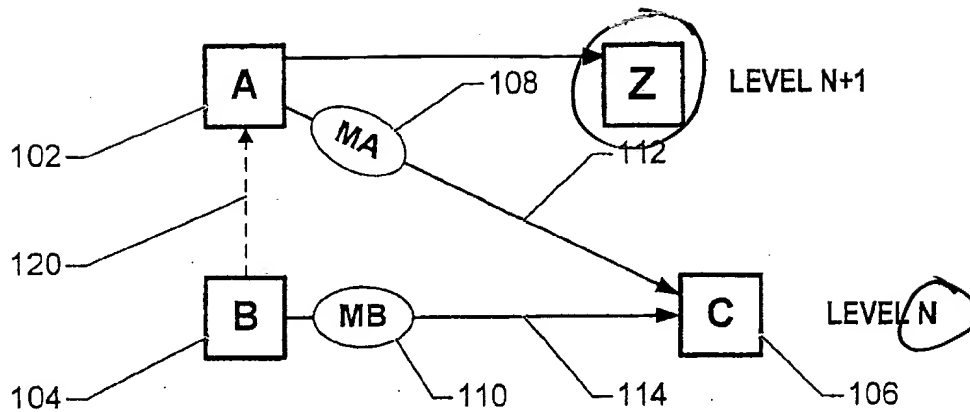
Docket No.: I2455.0009

ANNOTATED SHEET SHOWING CHANGES

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NODE INTERCONNECTIONS AND CONTROL

Fig 1

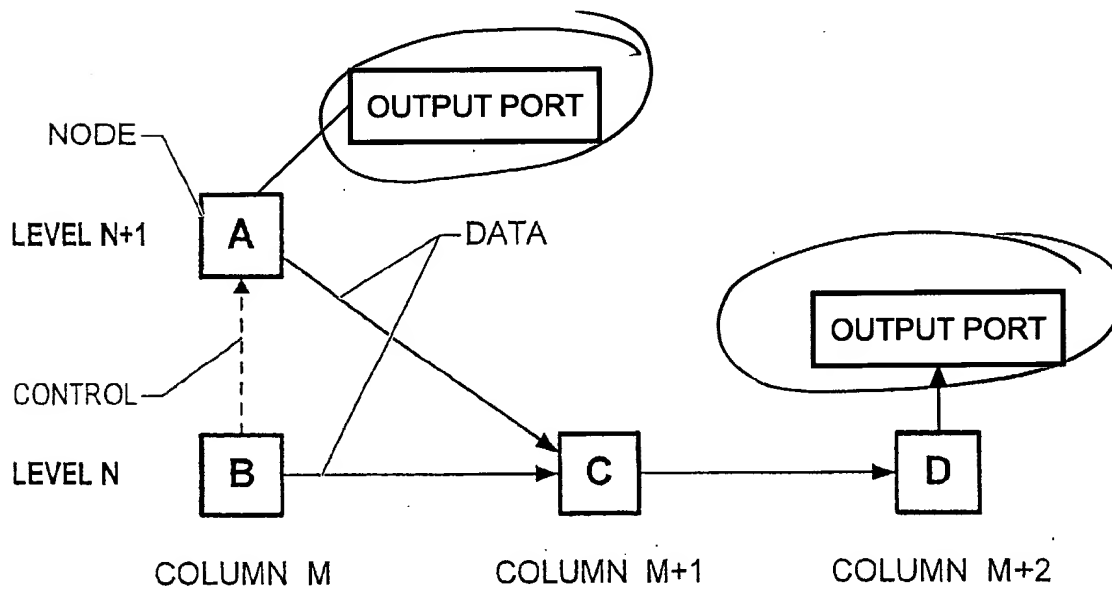
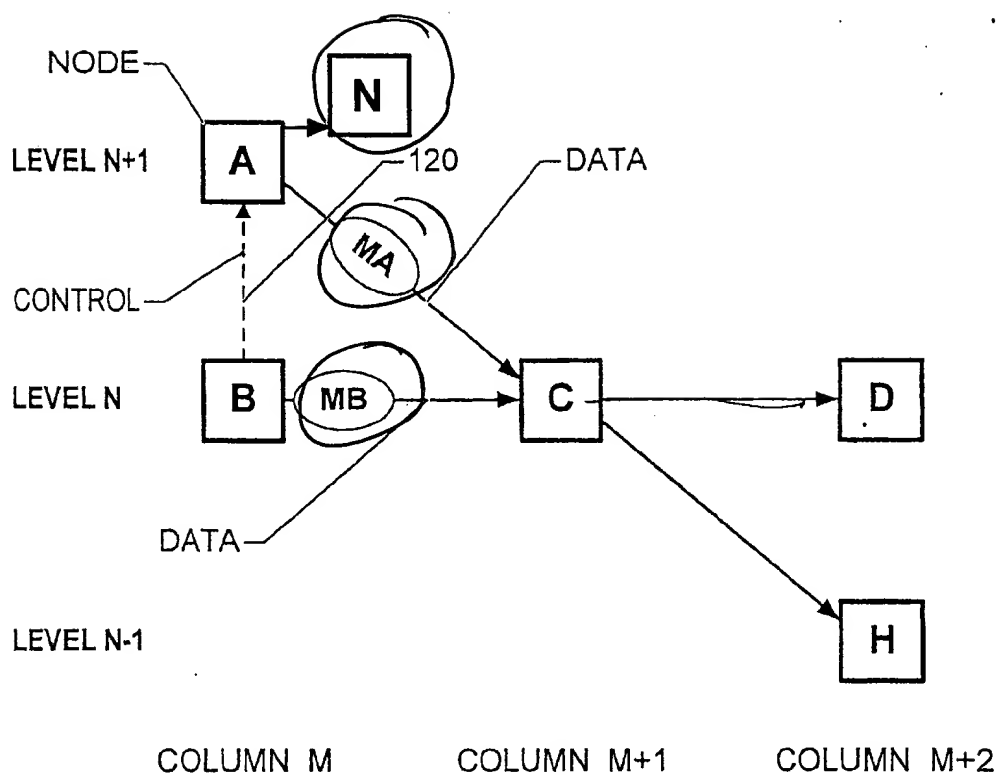
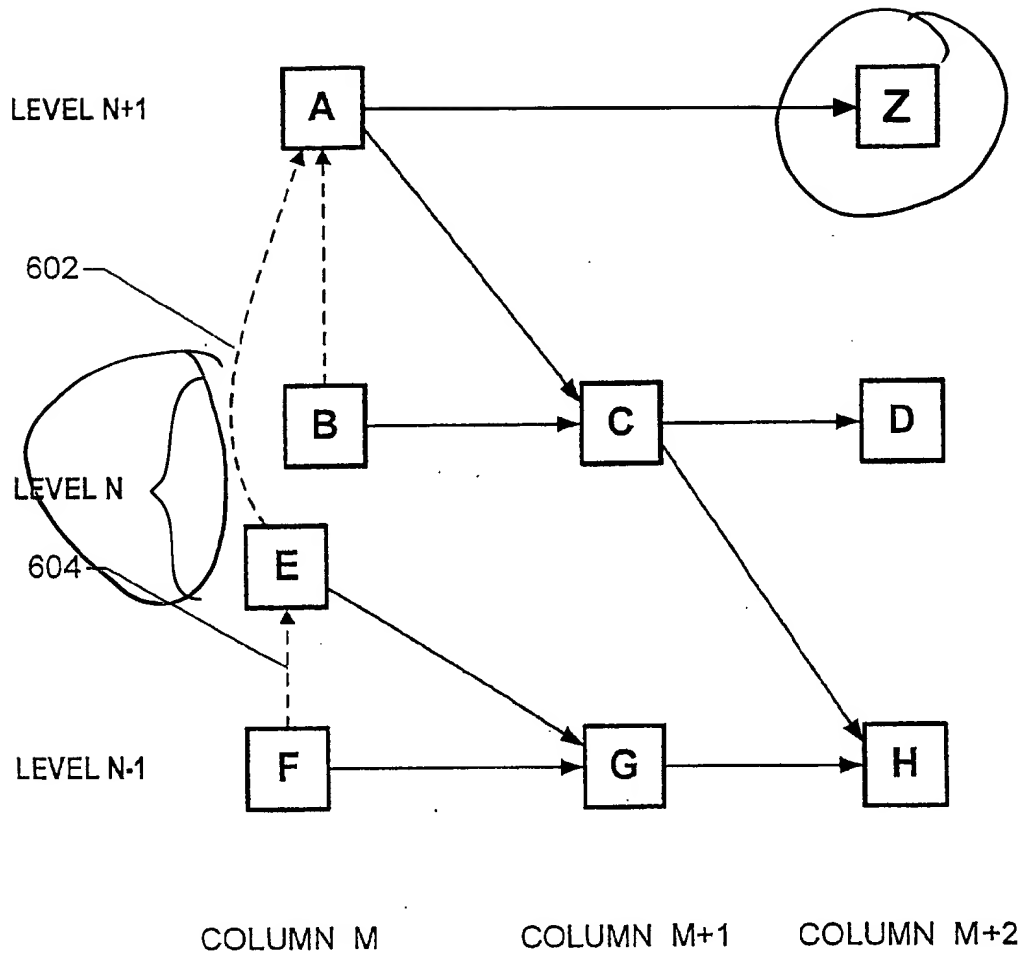


Fig 2



NODES ON THREE LEVELS

Fig 4



INTERLEVEL CONTROL SIGNALS

Fig 6A

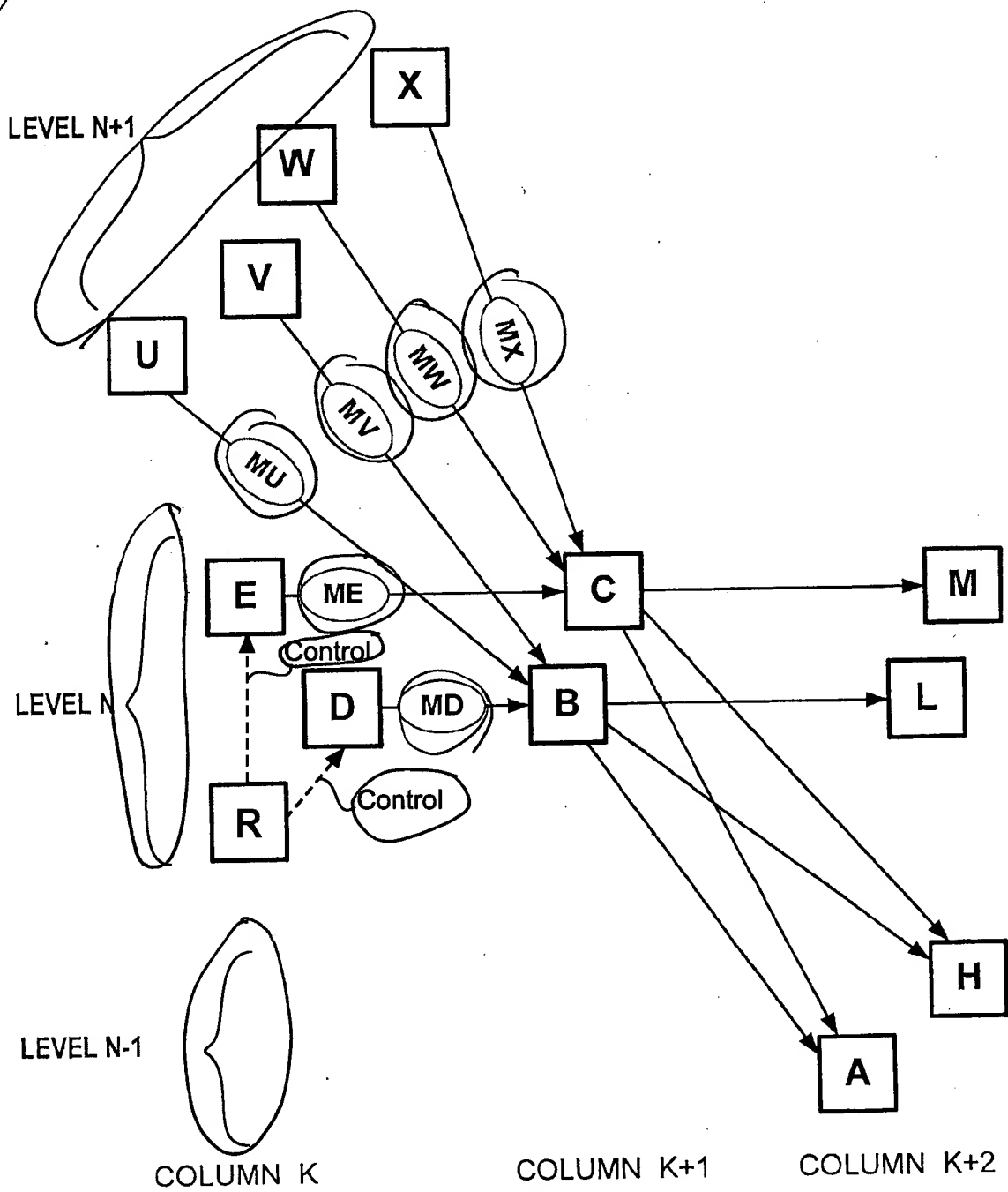


Fig 8

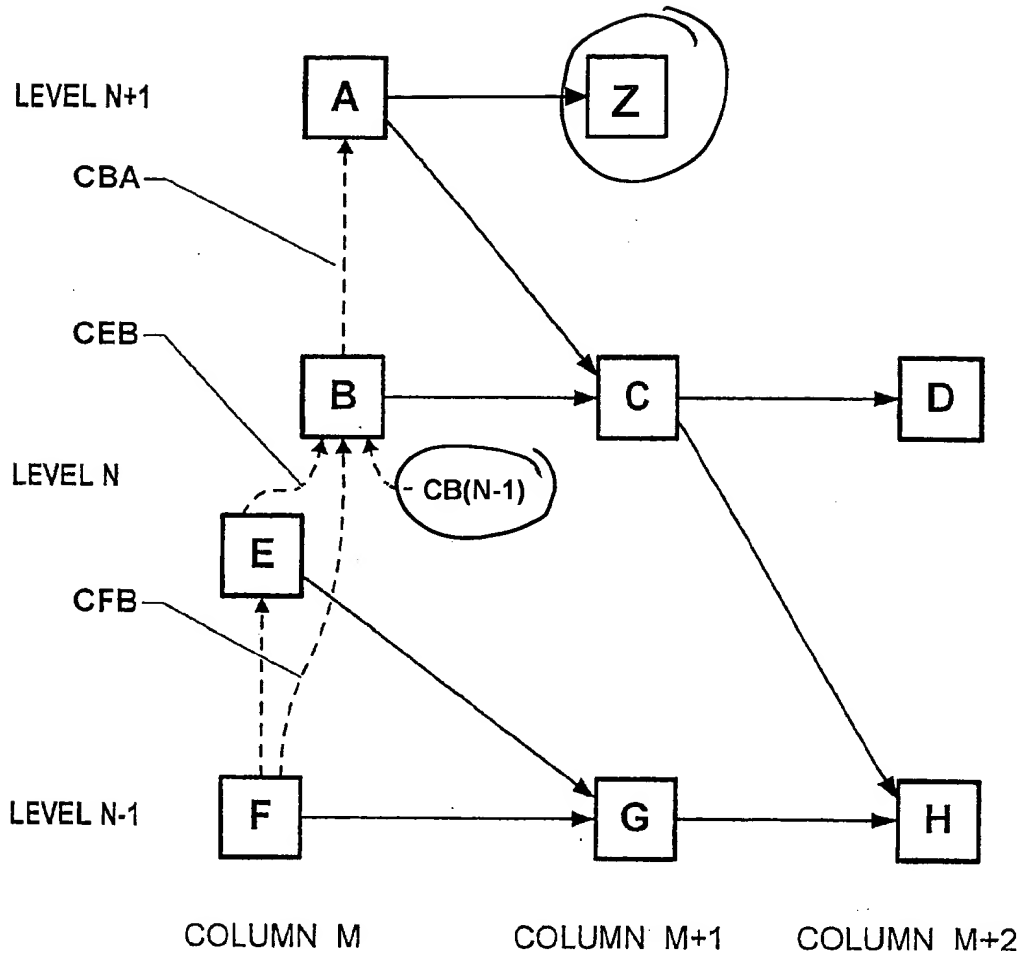


Fig 7